$1.50
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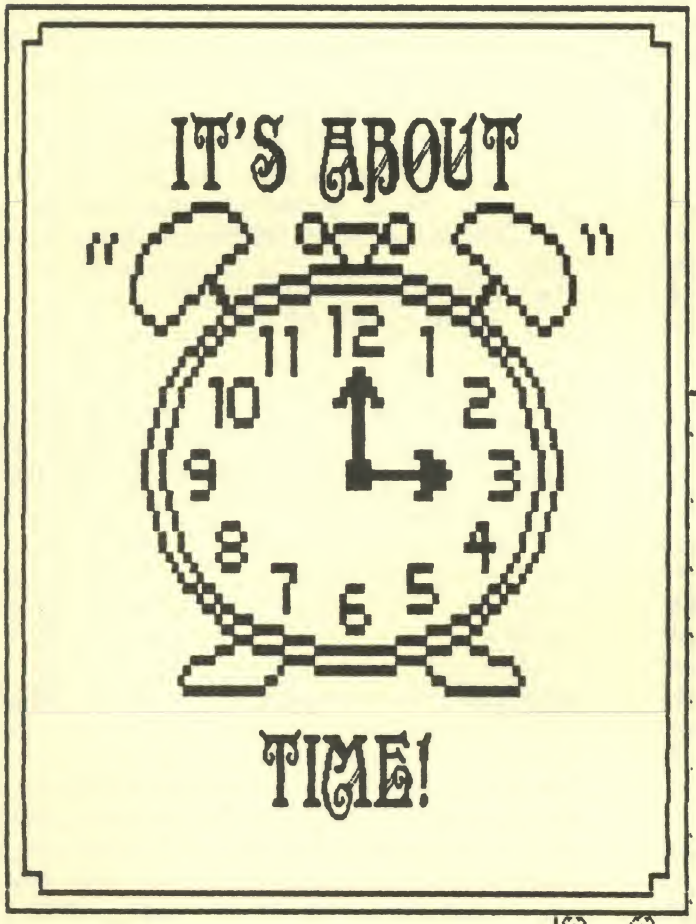
M.A.C.E. JOURNAL

"Devoted Exclusively To The Atari Computer User"



BUT, OH BRODER IT WAS WORTH THE WAIT!!

Published by the Michigan Atari Computer Enthusiasts

FIRESIDE CHAT

Well, folks, it's happened. The temperature is rising around the ol' fireside. As you know, MACE has been able to obtain some really nice group rates on certain hardware and software from Data World Distributing. I'm sure those of you who are now using your new Indus drives are pretty much happy with them. Aside from the OSS ToolKits, the Indus drives are the only item that has had any response. Since last October, when the Indus drives were first offered, approximatley 15 members have bought them.

Now comes the hard part. When a businessman calls and says he is prepared to offer merchandise to your members at substantial savings, do you say "No thank you, we can buy them for much more locally" or do you go for it? Well, we decided to go for it.

Data World, located in Tennesee, is a local retailer and out of state distributor. So what's the big problem? After all, judging by other Atari group newsletters we're certainly not the only ones who take advantage of such offers. However, our local advertisers have more or less insisted that we stop partcipating in group purchases or they will stop advertising. Fortunately, the financial impact of such a move would not be significant to the publication costs of this newsletter. Our three local advertisers cover about 1/5, maybe a little less, of its total cost.

Now then, after RiteWay finished calling all the other advertisers, I called them also. Two of the three are willing to discuss prices and the possibility of bulk ordering our equipment for us. So we are going to meet with them and discuss products, group wants and needs, and cost! MACE would be more than happy to continue our group purchases through a local dealer if possible. But, we will continue. After all, if we can't accept a reasonable offer just because it's an out of state source, there's always K-Mart and Toys-R-Us. And they don't tell us how to run our club.

Warmly,

Kirk

MACE GROUP PURCHASES

The following purchases are available for MACE members until April 10th:

From Data World Distributing:

Anchor Volksmodem 300/1200 baud
Hayes compatible...$225.00

Mpp 64k printer buffer
for any parallel printer...$105.00

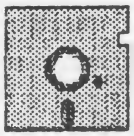
From Sector 1 International:

Atari 1020 color printer/plotter
(10 or more)...$59.00

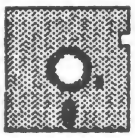
Send certified check or money order payable to MACE to the PO Box. Include your name, address, phone number and MACE membership number. Orders must be received by April 10th.

The MACE Journal is published monthly by the Michigan Atari Computer Enthusiasts. Unless otherwise noted, material published in the Journal is in the public domain and may be reproduced for private or user group use providing proper credit is given.

Submissions to the Journal can be mailed to the PO Box, uploaded to the MACE BBSs or the Superboard at (313) 543-4094, or uploaded directly to the editor at 646-4455. Where possible, submissions should include a disk or tape file in AtariWriter or similar format and a working copy of the program. Specify format for screen dumps (AtariArtist, Koalapad, etc.). Authors whose submissions are published will receive a certificate good for a free disk or tape from the MACE library. Deadline for submissions is the first of each month.



THE PRINT SHOP



BRODERBUND SOFTWARE
48K DISK * PRINTER REQUIRED
REVIEWED BY ANN MCBAIN EZZELL

I don't know about you, but I have been getting my computer magazines soggy by drooling over ads for Broderbund Software's Print Shop since they started announcing last fall that the program was available for Atari computers. Print Shop has been around for a couple of inconsequential other machines for a while, and the full color ads showing signs, greeting cards, and other printer masterpieces have been most tempting. Around Christmas, I actually saw Print Shop for the Atari listed as available from a mail-order (well, you can't buy ALL your software locally, you know!) house back East, and snatched up the phone to place my order. Alas, while they had been promised that stock would be available by the time their ads appeared, Print Shop had not yet been released. I placed an order anyway, full of hope that I would be sending out personalized Valentine's cards this year. Cupid came and went, but not the UPS truck.

As you may have guessed from this month's cover, Print Shop was in fact finally released, I got my copy, and my printer has been humming ever since. The program is all that the ads promised, and more. If you own one of the supported printers, get your hands on this program RIGHT NOW, stock up on computer paper, lay in some sandwiches, and have yourself a ball. Not convinced? Well, how about a few details?

Print Shop comes with a quality, 28 page Reference Manual which immediately tells you that the program is so easy to use that you don't have to read the manual. Being the cautious type, I looked through the manual anyway, and was impressed by its logical layout and clear graphics. The manual takes you step by step through the process of using Print Shop, occasionally interjecting boldface notes of special interest. There is also a Reference Card which shows the built in graphics and fonts, and the commands for entering text. Rounding out the package are samples of colorful (mine were bright blue) pinfeed paper and matching envelopes, a flyer advertising more paper, envelopes, and color printer ribbons, a $10 discount certificate good on a purchase of $50 or more of supplies, and...

THE PRINT SHOP PROGRAM DISK

The manual was right, you know. You don't really need to read it to use the program. Print Shop options are all selected from menus, with appropriate illustrations appearing as you highlight the various choices. The main menu offers: GREETING CARD, SIGN, LETTERHEAD, BANNER, SCREEN MAGIC, GRAPHIC EDITOR and SETUP. Selections are made with the cursor up and cursor down keys.

The first step is to SETUP the program to work with your particular printer. The back of the package states that Print Shop can only be used with the following printers: Apple Imagewriter, DMP, & Scribe, C. Itoh (Prowriter), NEC 8023A, Citizen MSP15, Legend 880, BMC, Blue Chip M120/10, Mannesman Tally Spirit 80, Admate DP-100, Star Gemini 10x/15x, Panasonic KX-P1090/1091, Centronics GLP (Axiom SLP), Okidata Microline 92/93, and the Epson RX-80/MX-80 & 100/FX-80 & 100/JX-80 (older Epson printer models may require Graftrax). The choices in the SETUP option of the program also include the Radix 10 and Delta 10 from Star Micronics. Not listed as supported, sadly, are the Gemini-10/15 series printers. I have a Gemini-10, and most of the functions can be made to work, with some limitations. I'm sure that whoever makes the decisions at Broderbund had good reasons for not supporting this extremely popular machine, but I fail to see them. If you have a Gemini-10/15 printer, use it to write to:

Broderbund Software
17 Paul Drive
San Rafael, CA 94903-2101

and lodge a protest. Then go out and buy Print Shop anyway, because it's so fantastic that even with the limitations imposed by a slightly different operating system, it's the best printer utility around.

But back to the program...
Once you have indicated the printer you will be using, you can print out a test that tells you if your printer is working properly and lets the program adjust its linefeed controls. (You might need to turn off the automatic linefeed DIP switch on your printer if you get extra spaces between the lines of print, but that's all covered in the manual.) You can then save the printer configuration to the Print Shop disk so that you won't have to go through the SETUP procedure each time you use Print Shop.

Having determined that your printer is ready to go, it's time to design your first creation. GREETING CARD is at the top of the menu, so let's start with that. Your first choice is whether you want to design your own or use one of the ready-made cards included on the disk (Birthday, Christmas, Season's Greetings, Valentine, Anniversary, Thank You, Invitation, or Note Paper). Most of these "canned" cards can be personalized with the name of the recipient. Illustrations of these pre-designed cards would have made a nice addition to the Reference Manual.

The first step in designing your own card is to choose the border for the front cover. You have nine from which to choose, or you may elect not to have a border. As you highlight your way through the menu selections, the border around the menu changes to show you what each border looks like (very nice touch). A heading at the top of the screen keeps track of where you are in the design process ("GREETING CARD: FRONT"), and a prompt at the bottom reminds you that you can hit ESCape to go back to the previous menu. This last feature makes Print Shop a dream to use, since you can step back through the menus to change one item without destroying your creation and having to start over.

After selecting a border, you get to choose from among the 60 graphics included on the disk, or you can load in your own design created with the built in GRAPHIC EDITOR. Each graphic is illustrated and numbered on the Reference Card, so you can make your choice by picture while stepping through the menu, or simply enter the number of the graphic. There are 50 detailed graphics for many occasions (Christmas tree, bunny, rocket, piano, Cupid, birthday cake, etc.) and 10 background patterns. As with all of the options, you may omit the graphics entirely.

Size of the design (small, medium, and large) is the next decision. A single large graphic will be centered on the page; up to 5 medium or 13 small graphics can be placed in staggered format. Small graphics can be "tiled", creating a mosaic appearance. The background patterns are always tiled.

Print Shop provides you with eight fonts to match the mood of your message. Once you have selected a font, the text entry screen will appear. The size of this screen is determined by the size of the chosen font; Print Shop will not let you enter more text than will fit on your design. Text can be printed in two sizes and three forms (solid, outline and 3-D). It can be centered or justified either right or left. There is a help menu available to explain these options, but the choices are also indicated on the screen as you edit. If you wish, Print Shop will center the text vertically for you.

You repeat the above procedures to design the inside of your greeting card, and then you are ready to print. I must admit I wondered about the first choice on the print menu: GIVE YOURSELF CREDIT. Was this a shortcut option for users who credited themselves with above-average computer literacy? No, it lets you put a by-line (or price, if you're going commercial) at the bottom of the back page, just like Hallmark and all the other biggies.

You can select the number of copies to print (default is 1), then test the paper position, which is critical to allow proper folding of the finished card. The test option prints a line of fine dots across the page. These dots should run directly over the perforations between the

sheets of paper. The test can be repeated until the paper is properly aligned. Next highlight the PRINT option, press <RETURN>, and sit back while the presses roll. (Well, you do have to flip the disk over to Side B, but nobody ever said life was fair.) In just a few minutes you will have a masterpiece suitable for mailing. Johann Gutenberg, eat your heart out!

You can repeat the same design by selecting PRINT again (more disk flipping), or step back through the menus to make any desired changes. You can also return to the main menu, thereby wiping out your design, but you have to tell the program twice to do this, which makes for a little added insurance against losing your work.

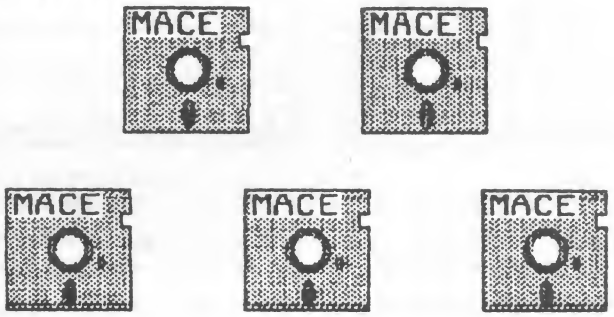
Speaking of the main menu, let's look at the other options. Designing a full-page SIGN is the same as creating one panel of a greeting card. You can create custom LETTERHEAD with a line of large, decorative type and up to three lines of smaller type at the top and/or bottom of the page, and you can embellish your stationery with graphics (different or the same for top and bottom) in assorted positions. The BANNER mode lets you print out letters and graphics horizontally to produce banners of any length. You can combine different fonts and graphics by printing banners consecutively.

Print Shop includes a separate program accessed by the SCREEN MAGIC option. This mode has 12 kaleidoscopes which allow you to freeze, save and print the patterns created. You can also overlay solid or outline text in any of the Print Shop fonts. The final screen can be printed in normal or inverse video, with or without a black frame, and covers either the top or bottom half of an 8 1/2 by 11 sheet of paper. Graphics created with SCREEN MAGIC are not interchangeable with those from the Print Shop files or GRAPHIC EDITOR. To save files, you must format a disk using the Print Shop disk. This disk cannot then be used for any files not in the Print Shop format.

The GRAPHIC EDITOR lets you create and save your own designs for inclusion in Print Shop products. You can also modify designs already on the disk. You draw by turning on pixels in an 88 x 52 grid. Cursor movement can be controlled from the keyboard, a joystick, the KoalaPad or the Atari Touch Tablet. I found the keyboard method a little tedious, but the other devices were reasonably easy to control. Mind you, this is by no means in the MicroIllustrator class, but it is certainly adequate for the purpose. The menu commands, listed on the right side of the screen, allow you to load or save a picture, clear the screen (you must confirm this choice), select the drawing device, return to the main menu, or print a sample of your picture to see how it will actually look. Another handy feature of this editor appears at the bottom of the screen, where the X and Y coordinates of the cursor are displayed, allowing you to keep track of its exact location. This is very useful when you are drawing a picture with a regular pattern.

In addition to thoroughly explaining the operation of the program, the Reference Manual includes a page of "Creative Ideas" and a number of tips about printers. The last page explains the limited warranty. If the disk fails within 2 years of purchase, it will be replaced free when returned with proof of purchase. If your dog chomps the disk, or it's been more than 2 years, it will cost you $5 (plus $2.50 postage and handling) for a replacement. This seems fair enough, but it would have been nice to be able to make a single back-up copy.

Now that you know all about the wonders of Print Shop, I expect that you will all rush right out and get a copy of your very own. You missed St. Patrick's Day, but Easter is coming up, Mother's Day... and don't forget Nikola Tesla's birthday (July 9th). The possibilities for creativity are endless. You can even design fantastic covers for your favorite user group newsletter!



PRINT SHOP AND THE GEMINI-10

As I mentioned in my review of Print Shop, the program is not designed to support the Gemini-10/15 printers (boo, hiss!). Most of the functions can be made to work properly, though, so I thought I would let other non-x owners know what I have discovered about using Print Shop.

The first thing you will need to do is turn off DIP switch number 4 (located at the left rear of the printer). This will disable linefeeds after CR (Carriage Return) code input. Remember to turn the switch back on before trying to do any other printing, or the printer will not work properly. The switch setting should be changed while the printer is turned off.

When you SETUP Print Shop for the first time, select the Gemini-10x/15x printer option and perform the printer test, then save the configuration to disk. The test will print a broken diamond rather than an unbroken one, but that's life.

The major problem in using Print Shop with the older Gemini printers seems to come from the way they handle linefeeds. This means that you cannot use the automatic paper alignment feature, because the printer will not space down to the proper starting point. I have found that lining up the horizontal perforations with the lower angle in the metal which is on either side of the platen works well. (Remove the printer cover and look to the side of the platen just above the ribbon; you will see the angle in the metal support.)

When printing greeting cards, you will not get proper spacing between the front and inside panels. The program stops to think and access the disk after printing the inner panel. During this pause in printing, use the ON LINE button on the printer to go off line and tap the L.F. (Line Feed) button 14 times. Put the printer back on line and everything should line up just fine. You will have to realign the paper to do more printing. To print multiple copies, you will have to realign manually between sheets.

I have had no trouble printing signs. Line up the paper the same as for the greeting cards.

Without automatic linefeeds, spacing between the top and bottom parts of a letterhead will not be correct with DIP switch 4 set to OFF. I have done only a little experimentation, but letterhead, including graphics, seems to print properly with switch 4 on. (Remember to turn off the printer before changing the DIP switch settings.) You can use the built in paper alignment procedure if switch 4 is on.

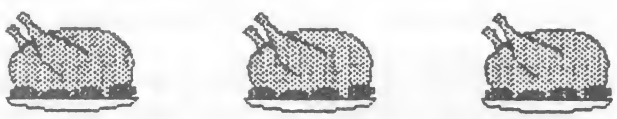
Banners do not seem to work at all well on the Gemini-10. The spacing on some of the graphics is irregular, and there is too much space between the lines of blocks that form the letters.

Pictures printed with the SCREEN MAGIC mode have a blank line near the top of the picture, which may or may not be much of a problem depending on the density and shape of the design. (I use a felt-tip pen to fill in the border when necessary.)

When printing a sample of an edited shape from the GRAPHIC EDITOR, there is also an extra blank line at the top, and trailing horizontal lines to the right of the picture. The result is reasonably legible.

So, if you wanted Print Shop for its banner-making capabilities and you own a Gemini-10/15, forget it. (There are lots of public domain banner programs around, anyway.) Otherwise, I think it's worth it. You aren't likely to find another program that will do anywhere near what Print Shop can do, even though it isn't 100% compatible with your printer. Remember, even a rose has thorns.

(If anyone else has any advice about using Print Shop with non-supported printers, please let me know, and I will pass the information on.)



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DON'T SEE IT? PLEASE CALL - 313-978-2208

SIG-ED RETURNS!

The MACE Education SIG will meet on Wednesday, April 17th at Mount Clemens High School. This meeting is open to anyone interested in computers in education. For more information or directions to the high school, call SIG-ED Chairman Mark Kennedy evenings at (313) 465-5849.

AGENDA

7:00 pm Greetings
7:10 pm LOGO SAMPLER demo
7:20 pm SOUND-SPELL demo
7:30 pm tba
7:40 pm Publisher Project (announcement)
7:45 pm Open discussion
8:00 pm Free refreshments
8:15 pm PRINTWIZ (look-see-try)
to and
9:30 pm Exchange of user written programs

EAST SIDE SIG
DISK CASE SPECIAL

MACE's East Side SIG is selling portable disk cases for $25.00. These hard cases have a carrying handle and removable top and hold about 150 disks. To order or for more information, call Ron at (313) 778-7832 or Mike at (313) 751-7290.

The East Side SIG meets the 1st Tuesday of each month at 7:00 pm at the Italian Cultural Community Center, 28111 Imperial in Warren (between Hoover and Schoenherr).

FORTH INTEREST GROUP

The Detroit Area Chapter of the FORTH Interest Group (FIG) will have its next meeting on Tuesday, March 26th at 7pm at the Ford Motor Company Diversified Products Technical Center (Meeting Rm. B), 17000 Rotunda Drive (NE corner of Southfield Rd.) in Dearborn. For more infomation about the local chapter, contact Tom Chrapkiewicz at (313) 562-8506 or 845-4570 x60.

OTHER SIGS

Atarimusic SIG: Contact Mike Lechkun at 978-8432 or leave a message for the Sysop on the MACE BBS (313) 978-1685.

Assembler SIG: Meetings are the 1st Thursday of each month. Contact Todd Meitzner at (313) 542-1752 for more information.

Graphics SIG: Did anyone ever get this SIG started? Please let us know when and where you are meeting.

If there are any other SIGs currently active, send information about your meetings to the Journal Editor. If anyone would like to see a SIG started, let us know.

MESSAGE BASE

We have some information from Antic Magazine via one of our members regarding a typing service which formerly advertised in Antic and went out of business without fulfilling its obligations. The company was AMTYPE, based in Las Vegas. If you did not receive satisfactory service from this company, you can contact Stephanie Love at the Joyce and Martin Advertising Agency (telephone (702) 382-4008). That agency arranged the advertising for AMTYPE and was Antic's contact. Good luck.

In the October 1984 issue of the MACE Journal, there was a review of PRO*PLUS, a utility for the ProWriter printer. Information about where to obtain the product was inadvertantly omitted. You can contact Mike Yocum, author of PRO*PLUS, at:

3118 North Prospect
Peoria, IL 61603
(309) 688-1679

MACE still needs volunteers to run the coffee and pop table at our meetings. Contact Kirk or Scott if you are willing to help out with this or at the other tables.

GRAPHICS 8 TEXT IN ACTION!

by Ann McBain Ezzell

Atari's high resolution graphics mode (GR. 8) is wonderful for detailed displays, but you are normally restricted to a maximum of four lines of text at the bottom of the screen. You can of course insert lines of Graphics 0 text by altering the display list, but you cannot display graphics on such lines. Fortunately, it is possible to mix text with hi-res graphics by copying the Atari character set bit patterns into the Graphics 8 display memory.

Atari characters are printed in an 8x8 matrix. The data for each character are stored in sets of 8 consecutive bytes starting at location 57344 ($E000). (See page 143 of Ian Chadwick's Mapping the Atari for a more detailed description of the character set.) The patterns of "on" bits in the character set bytes form the characters on the screen. Since each bit in the screen memory bytes for Graphics 8 controls one pixel of display, it is possible to do a one-to-one mapping from the character set bits into Graphics 8 screen memory and create text on the graphics screen.

Fetching the data from the character set and POKEing it into screen RAM using Atari BASIC would be excrutiatingly slow, but ACTION! plots text in Graphics 8 almost as quickly as the Operating System prints Graphics 0 text. (Well, my eyes can't see any difference...) These ACTION! routines will also let you plot "tall" letters that are twice the height of Graphics 0 characters. Any characters you can type in will be reproduced, including inverse video.

To use this program, type in the routines using the ACTION! Editor and write a copy to disk or tape. Exit to the Monitor and compile the program, then run it. If you have typed the routines without errors, you will see a blank Graphics 8 screen with a prompt in the text window. Choose "T" for tall letters or "N" for normal, then decide where you want your text to start. You can specify a horizontal starting position from 0 to 312. Normal Graphics 0 (40 column spacing) would have letters starting at multiples of 8 (0, 8, 16, etc.), but you can start anywhere you wish. Next you choose the vertical starting position, from 0 to 153. Again, Graphics 0 spacing would be at multiples of 8.

You will next be prompted to enter up to a maximum number of characters, based on the horizontal starting position. Limiting the length of your line of text will prevent letters from wrapping around and overwriting the beginning of the line. The routine checks to make sure that you have not entered too many characters. If you have, you must enter fewer. After the program prints your text, you will be asked if you want to print more text. If so, you can again choose tall or normal characters, then specify the starting positions.

When you have finished entering all the text, you will be given a chance to save the screen. The program uses BPut() from the ACTION! ToolKit to save the screen RAM. If you have the ToolKit, INCLUDE the IO.ACT file when you compile this program. If you don't have the ToolKit, you will have to write your own routine to replace "savescreen()". (To test the rest of the program, make "savescreen()" a null routine so that it will compile without errors.)

```
BYTE max,chr,errorcode,inverse,
   i,remain,tall,
   e=[0]

CARD start,screen,holderror

BYTE ARRAY charset(1024)=$E000,
   text(40),filename(15)

;
;replacement error processing
;routine - see ACTION! library
;procedure Error
;

PROC traperror(BYTE errorcode)
 IF errorcode=137 THEN
  PrintE("Too many characters!")
  e=1
 FI
RETURN
```

```
;
;loops until key is pressed
;

PROC waitkey()
 WHILE Peek(764)=255
  DO OD
 Poke(764,255)
RETURN

;
;returns upper case normal video
;- rejects non-letters
;

BYTE FUNC getchar()
 chr=GetD(7)
 IF chr>127 THEN
  chr==-128
 FI
 IF chr<'A OR (chr>'Z AND chr<'a)
  OR chr>'z THEN
  getchar()
 ELSEIF chr>='a THEN
  chr==-32
 FI
 Put(chr)
 PutE()
RETURN(chr)


PROC getfile()
 Print("Enter filename ")
 PrintE("(including device) :")
 InputS(filename)
RETURN

;
;setup procedures
;

CARD FUNC getvalue(CARD val)

 CARD c

 c=InputC()
 IF c>val THEN
  Put(253)   ;buzzer
  Print("(0-")
  PrintC(val)
  Print("), please: ")
  getvalue(val)
 FI
RETURN(c)


PROC findstart()

 BYTE scrlo=$58,scrhi=$59

 CARD xstart,ystart

 Put(125)
 Print("(T)all or (N)ormal? ")
 chr=getchar()
 IF chr='T THEN
  tall=1
 ELSEIF chr<>'N THEN
  findstart()
 ELSE
  tall=0
 FI
 Print("Enter starting column ")
 Print("(0-312): ")
 xstart=getvalue(312)
 Print("Enter starting row ")
 Print("(0-153): ")
 ystart=getvalue(153)
 screen=scrlo+256*scrhi
 start=screen+xstart/8+40*ystart
 ;avoid text wraparound
 max=(320-xstart)/8
 remain=xstart MOD 8
RETURN


PROC gettext()
 Print("Enter up to ")
 PrintB(max)
 Print(" character")
 IF max>1 THEN
  Print("s")
 FI
 PrintE(" of text: ")
 holderror=Error
 Error=traperror
 InputMD(0,text,max+1)
 Error=holderror
 IF e THEN
  e=0
  gettext()
 FI
RETURN


PROC setup()
 findstart()
 gettext()
RETURN
```

```
;
;convert ATASCII to character code
;

BYTE FUNC convert(BYTE ascii)

BYTE ccode

 IF ascii > 127 THEN
  ascii==-128
  inverse=1
 ELSE inverse=0
 FI
 IF ascii>95 THEN
  ccode=ascii
 ELSEIF ascii>31 THEN
  ccode=ascii-32
 ELSE
  ccode=ascii+64
 FI
RETURN(ccode)

;
;fetch the data from character set
;- XOR with 255 to invert bit pattern
;for inverse video printing
;

BYTE FUNC fetchbyte(BYTE ctr,code)

 BYTE cbyte

 cbyte=charset(8*code+ctr)
 IF inverse THEN
  cbyte==!255
 FI
RETURN(cbyte)

;
;put proper values into screen RAM
;- for tall letters, put each byte
;in twice
;- if letters are offset horiz.
;from Gr.0 positions, spread bits
;out over two bytes of screen RAM
;

PROC putb(CARD offset,BYTE newbyte)

 BYTE b1,b2,s1,s2

 CARD loc

 IF tall THEN
  offset==*2
 FI
 loc=start+offset
 IF remain THEN
  b1=newbyte RSH remain
  b2=newbyte LSH (8-remain)
  s1=b1%Peek(loc)
  s2=b2%Peek(loc+1)
  Poke(loc,s1)
  Poke(loc+1,s2)
  IF tall THEN
   Poke(loc+40,s1)
   Poke(loc+41,s2)
  FI
 ELSE
  Poke(loc,newbyte)
  IF tall THEN
   Poke(loc+40,newbyte)
  FI
 FI
RETURN

;
;for each character, get each of 8
;bytes from character set and put
;into screen RAM
;

PROC eachchar(BYTE c)

 BYTE b,cbyte

 c=convert(c)

 FOR b=0 to 7
  DO
  cbyte=fetchbyte(b,c)
  putb(b*40,cbyte)
  OD
RETURN


PROC printtext()
 FOR i=1 to text(0)
  DO
  eachchar(text(i))
  start==+1
  OD
RETURN
```

```
PROC printloop()
  Graphics(40)
  setup()
  printtext()
  Put(125)
  Print("More text? (Y/N)")
  chr=getchar()
  IF chr=89 THEN
   printloop()
  FI
RETURN

;
;- uses BPut() from ACTION! ToolKit
;

PROC savescreen()
  Print("Save screen? (Y/N) ")
  chr=getchar()
  IF chr=89 THEN
   getfile()
   Close(2)
   Open(2,filename,8,0)
   BPut(2,screen,6400)
   Close(2)
  FI
  Print("Press any key to continue")
  waitkey()
RETURN

PROC main()
  Graphics(8)
  printloop()
  savescreen()
RETURN
```

Here is a sample procedure to load in a screen saved with the above program. It uses BGet() from the ACTION! ToolKit.

```
PROC loadpic()

  BYTE scrlo=$58,scrhi=$59

  Graphics(8)
  screen=scrlo+256*scrhi
  Close(2)
  getfile()
  Open(2,filename,4,0)
  BGet(2,screen,6400)
  Close(2)
  waitkey()
RETURN
```

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ACTION! TOOLKIT

Reviewed by Ann McBain Ezzell

The ACTION! language from Optimized Systems Software is a programmer's dream, providing a structured, high-level language that compiles to run at near-machine language speeds, but trying to learn to program in ACTION! by reading the supplied reference manual is like trying to learn conversational English from Roget's Thesaurus. The introduction clearly states that it is not a tutorial, but rather a reference manual, an admission which is admirable for its honesty but not much help to someone wanting to learn the language. (I heard a rumor to the effect that the authors of the ACTION! manual attended the Marcel Marceau School of Documentation.)

So what do you do while waiting for Berlitz to come out with a six week crash course in ACTION!? For starters, you might want to invest in the ACTION! ToolKit. The ToolKit provides you with some useful routines for handling such things as player/missile graphics and real (non-integer) numbers, plus demo programs showing ACTION!'s strength in sound and graphics. You can of course simply include the provided routines in your own ACTION! programs, but you can also study the source listings (most of the routines are written in ACTION!, with a few machine language enhancements where warp speed is essential) and pick up some ideas that will help you create your own masterpieces.

There are twelve files of routines on the TookKit disk, five stand-alone demo files, and assorted short demos. It struck me that some of the routines might have been included simply to fill up the disk; perhaps I was being uncharitable. You can certainly judge for yourself, but it seems to me that anyone who would understand the meaning of "absolute value" would be able to write a routine to return the absolute value of a number. Nevertheless, there are certainly enough truly useful routines on the disk to make it a worthwhile purchase, whether or not you take the time to study them as programming examples.

In addition to the ABS.ACT file, the following routines are provided:

ALLOCATE.ACT - to allow dynamic runtime memory manipulation. These routines could stand more documentation, specifically an explanation of why one would want to use them.

CHARTEST.ACT - to test single characters to see if they are alphabetic, numeric, upper case or lower case; also to change letters to upper case or lower case.

CIRCLE.ACT - to draw a circle of specified center, radius and color. Very fast.

CONSOLE.ACT - to hook the execution of a specific routine to the pressing of one of the console keys (OPTION, SELECT, START). These routines would be very useful for anyone writing a menu-driven program.

IO.ACT - to do "advanced disk file manipulation". Well... Five of these routines simply hold your hand through the XIO procedure in the ACTION! Library (included in the SuperCartridge) to format a disk, rename, erase, protect or unprotect a file. The last two routines, BGet and BPut, are useful and advanced. They make use of Atari's CIO routines to read and write blocks of data with a specified device. These make saving and retrieving screen displays a piece of cake, a fact which could have been pointed out on the blank half page at the end of this section of the manual.

JOYSTIX.ACT - to return the horizontal and vertical position of a specified joystick. These are improvements on the Stick function in the ACTION! library and are certainly very easy to use.

PMG.ACT - to allow easy implementation of Atari's player/missile graphics (PMG) capabilities. These commands should should be part of any language for the Atari. With a BYTE ARRAY declaration and four simple procedures, you can set up your PMG system, then use the other functions and procedures to move the P/Ms, keep track of their horizontal and vertical positions and handle collisions. (There is a small documentation error in this

section; a procedure actually called PMColor is referred to as PMSetColor.)

PRINTF.ACT - extensions of the Library PrintF routine, to allow control of field size and justification in printed output. When neatness counts, these routines will be a big help.

REAL.ACT - to allow access to the ROM floating point routines. A big sigh of relief is heard from the hard core number crunchers... Using these routines isn't trivial, but you can dust off your decimal points and rejoin the real world. These routines plus the PMG set would make the ToolKit a worthwhile package for any serious programmer.

SORT.ACT - to sort byte, cardinal, integer or string data using the QuickSort algorithm. Now you can write a mailing list program in ACTION!

TURTLE.ACT - to implement (sort of) turtle graphics in any graphics mode which supports Plot and Drawto. You can set the turtle's position and heading, turn it left or right a specified number of degrees, and move it forward a specified length. Not much for diehard Logo fans, but an easy way to draw regular geometric figures without doing a lot of calculations of vertices.

The demo programs consist of three games (Gem, Snails' Trails and Warp Attack), a graphics demo (Kaleidoscope - what else?) and a sound demo which produces an organ played from the keyboard. I found this last program to be the most impressive, partly because it taught me something about the Atari which I hadn't known (how to determine how long a key is pressed). The authors could have included documentation for the source listings of these programs; even without this added help they are useful as examples of ACTION! programming techniques.

So - should you buy the ACTION! ToolKit? Are you going to use your ACTION! cartridge for more than keeping the dust out of the cartridge slot in your Atari? By all means, buy the ToolKit, and when you send in your Warranty card, tell them you want to see an ACTION! tutorial...

OMNIVIEW AND RAMROD

Newell Industries

Reviewed by Mike Taylor

If you've ever worked with a professional word processor or even a word processing program on an 80 column computer, you're probably disappointed with the 40 column Atari word processors. Although 40 column word processors can be very functional, they have one major problem. The way the text looks on the screen is almost never the way it will look when you print it. Some word processors, such as AtariWriter, have supplied a windowing method to "preview" the text before you print it. Still, flipping between preview and edit mode can be cumbersome.

Thanks to Newell Industries' Ramrod and Omniview, the Atari computer can now produce a 24 row by 80 column display. The 80 column mode will work with any program that uses the normal non-split-screen editor such as Atari BASIC. Programs that use custom screens such as MEDIT, VISICALC, and AtariWriter, will not function correctly in 80 column mode.

Using 80 column word processing has two distinct advantages over 40 column. First, the text on your screen will always look very much, if not exactly, like the printed version. No more problems lining up columns. Second, about twice as much text is displayed at one time, which reduces the amount of scrolling necessary.

Newell Industries claims that 80 column mode can be used on a normal color TV for what they call "casual" 80 column work. I've found that unless you want a headache and sore eyes, a monitor must be used to see text clearly in 80 column mode.

The Omniview manual supplies modifications to make Letter Perfect and Data Perfect compatible with the Omniview 80 column mode. Modifying Data Perfect and Letter Perfect took me about 15 minutes, but if patching programs is not your cup of tea, CDY Consulting (214-235-2146) will make the modifications for you for a $10.00 fee. I will

personally make the modifications for MACE members free (call 313-574-1131).

Letter Perfect version 6.05, in 80 column mode, is one of the best word processors I've ever used with the Atari. I have an IBM PC at work with Multimate and Word Star which are two of the best word processors made for the IBM. So far, I haven't seen any advantages to word processing on my $5000 IBM system as opposed to my inexpensive Atari at home.

This wonderfull piece of equipment comes in two flavors: Ramrod for the 800, and RamrodXL for Atari XL systems. Ramrod is simply a circuit board that replaces the OS cartridge in the back of the 800 computer. RamrodXL is installed by removing the old operating system chip from inside the computer and plugging the RamrodXL board into the same socket. The old operating system chip can then be plugged into an empty socket on the RamrodXL board. A switch is included to toggle between the old OS, Ramrod(XL), and Omniview. Omniview is a chip which also plugs into the Ramrod(XL) board and allows 80 column mode.

MORE ADVANTAGES

No translator is necessary with RamrodXL. The Ramrod operating system is compatible with the old 800 OS.

The keyboard response is twice as fast as with the old Atari OS. This is a welcome feature for people who type faster than normal or use the cursor control keys a lot. The cursor moves across the screen two times faster than the old Atari OS will allow.

The cassette interface has been improved to transfer data 2.5 times faster (1500 baud) than normal.

For an additional $29.95 the "Fastchip" math co-processor can be installed. Fastchip will automatically speed up any math functions. The documentation claims speeds up to four times as fast.

Omnimon, a tool for machine language programming, comes standard with Ramrod or RamrodXL. Omnimon allows you to interupt any program at any time, programmably or by pressing the OPTION and RESET keys. Once Omnimon has started, memory locations can be examined, changed, disassembled, or written to disk, even without DOS!

Other features of Omnimon include hex conversion, hex arithmetic, single step program execution, lockup recovery, line assembly, search memory for a sequence, move blocks of memory, ram disk handling, load binary files without DOS, display disk directory and much more.

Ramrod(XL) sells for $119.95 list. Omniview costs an additional $59.95. I was able to purchase Ramrod, Omniview, and Fastchip for $154.40 through a mail order service. If Ramrod and Omniview are ordered together, they come preassembled and ready to plug in.

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BANNER GENERATOR

by Scott Garland

This program will create a banner in normal or inverse video format. You can choose the height and width of the characters.

The program is written for Gemini-type printers. The commands in line 35 set up the printer; you may need to change them for your particular printer. (Check your manual.) The commands are as follows:

CHR$(27);CHR$(48) - sets linefeed to 1/8"
CHR$(27);CHR$(69) - emphasized printing
CHR$(13) - prints out buffer and does CR

When typing in the DATA statements, remember the Journal listing conventions. Underlined characters are to be printed in inverse video. The DATA strings are cominations of inverse video spaces and asterisks. Since the listing is printed in 38 column format just as it will appear on your video screen, you can check the alignment of the asterisks to make sure you have typed in the strings correctly. It might be a good idea to print out a sample alphabet banner after saving the program to check for errors.

```
0 DIM MESSAGE$(200),ASCII$(1),LETTER$(
56),LINE$(80),NI$(1),B$(1),F$(1),SPACE
$(80)
10 ? "{CLEAR}"
20 GRAPHICS 0:SETCOLOR 2,0,0:SETCOLOR
4,0,14
30 POKE 82,5:POKE 83,38
35 LPRINT CHR$(27);CHR$(48);CHR$(27);C
HR$(69);CHR$(13)
40 ? "INPUT YOUR MESSAGE":INPUT MESSAG
E$
41 B$=" ":F$="*"
43 ? "NORMAL OR INVERSE";:INPUT NI$:IF
 NI$="I" THEN B$="*":F$=" "
44 SPACE$=B$:SPACE$(80)=SPACE$:SPACE$(
2)=SPACE$:REM MAKES A STRING OF SPACES
 FOR NORMAL, ASTERISKS FOR INVERSE
45 ? "HEIGHT OF BLOCK (1-10)";:INPUT H
:? "WIDTH OF BLOCK (1-10)";:INPUT W
47 MARGIN=(80-(7*H))/2-1:REM BORDER
49 POKE 559,0:REM TURN SCREEN OFF TO
SPEED THINGS UP A BIT
50 FOR L=LEN(MESSAGE$) TO 1 STEP -1
60 RESTORE 1000+ASC(MESSAGE$(L,L))
70 READ LETTER$:CTR=1
80 FOR L1=7 TO 0 STEP -1
90 FOR L2=0 TO 6
100 ASCII$=LETTER$(L2*8+L1+1)
110 IF ASCII$="_" THEN ASCII$=B$
120 IF ASCII$="*" THEN ASCII$=F$
130 FOR L3=1 TO H
140 LINE$(CTR,CTR)=ASCII$:CTR=CTR+1
150 NEXT L3
160 NEXT L2:LINE$(7*H+1)="":CTR=1
165 FOR L4=1 TO W:LPRINT SPACE$(80-MAR
GIN);LINE$;SPACE$(80-MARGIN):NEXT L4
170 NEXT L1:FOR L4=1 TO W:LPRINT SPACE
$:NEXT L4
180 NEXT L
200 POKE 559,34
1032 DATA ________________________
_________________________
1033 DATA   ***     ***     ***
*             ***     ***
1039 DATA  **     **     **
_________________________
1040 DATA   ***    ***    ***     ***
    ***      ***      ***
1041 DATA  ***      ***      ***
***    ***    ***    ***
1044 DATA ________________________
    ***     ***     *
1046 DATA ________________________
     ****    ****    ****
1048 DATA  ****   ******  **  **  **
 **  **  **  ******   ****
1049 DATA   **     ***      **      *
*     **      **     ****
1050 DATA  ****   ******      **   **
**   **      ******  ******
1051 DATA  ****   ******      **    *
**       **  ******   ****
1052 DATA  **  *   **  **  **  **  ***
***   *****      **       **
1053 DATA  ******  ******  **        **
**       **  ******  *****
1054 DATA  ****   **  **  **      ***
**   **  **  ******   ****
1055 DATA  *****  ******      **
**     **     **     ***
1056 DATA  ****   ******  **  **   **
**   **  **  ******   ****
1057 DATA  ****   ******  **  **   **
***      **     **     **
```

```
1063 DATA  ****   ******  **  **
**     **            **
1065 DATA  ****   ******  **  **  ***
***  ******  **  **  **  **
1066 DATA  *****  ******  **  **  ***
**   **  **  ******  *****
1067 DATA  ****   ******  **   *  **
     **   ** ******   ****
1068 DATA  *****  ******  **  *** **
  ** **  *** ******  *****
1069 DATA  *****  ******  **      ***
**   **      ******  *****
1070 DATA  ******  ******  **      ***
*    ****    **      **
1071 DATA  ****   ******  ***     **
 *** **   ** ******   ****
1072 DATA  **  **  **  **  ******  ***
***  **  **  **  **  **  **
1073 DATA  ******  ******    **      *
*      **    ******  ******
1074 DATA  *****   *****     **
 **  **  **  ******   ****
1075 DATA  **  **  ** **   ****    ***
*    ** **   **  **  **  ***
1076 DATA  **      **      **      **
     **      ******  ******
1077 DATA  *** *** ******* ** * ** **
* ** **   ** **   ** **   **
1078 DATA  **   ** ***  ** **** ** **
**** **  *** **   ** **   **
1079 DATA  ****   ******  **  **  **
 **  **  **  ******   ****
1080 DATA  ****   ******  **  **  ***
***  *****   **      **
1081 DATA  ******  ******* *    ** *
  ** * ** ** *  ***  **** **
1082 DATA  *****   ******  **  **  ***
**   ** **   **  **  **   **
1083 DATA  ****   ******  **      **
**      **  ******   ****
1084 DATA  ******  ******    **      *
*      **      **      **
1085 DATA  **  **  **  **  **  **  **
 **  **  **  ******   ****
1086 DATA  **  **  **  **  **  **  **
 **  **  **   ****     **
1087 DATA  **   ** **   ** **   ** **
* ** ** * **  ** **   ** **
1088 DATA  **  **  **  **   ****     *
*     ****   **  **  **  **
1089 DATA  **  **  **  **  **  **   **
**     **      **      **
1090 DATA  ******  ******    **      *
*     **    ******  ******
```

THE XL BOSS

Allen Macroware

Reviewed by Kirk Revitzer

After many frustrating bouts with various translators for the XL computer, I finally decided to install the XL Boss by Allen Macroware. So far the results have been very favorable. Just about everything will run on the XL, with no more translator disks. The only problem so far has been with older Electronic Arts Software which checks at memory location $C000 and thinks there is a cartridge plugged in. Other than that everything, even things that wouldn't work with a translator will now run.

The XL Boss is actually easier to install than the instructions make it look. Simply remove the top of the computer (6 Phillips screws underneath) and remove the RF shield inside (1/4" nut driver). The chip to remove is on the right hand side of the board and is the smaller of the two located there. The XL Boss is mounted on a small 'piggy back' board so that once installed you can plug the original OS in the empty socket provided for it.

Now, to switch back to the old Atari OS (what for??) there is a small toggle switch with about 4-5" of wire. According to the documentation, this should be installed in a hole that you must drill inside the cartridge slot door. I didn't. The wire is more than long enough to reach the rear panel and I simply drilled through the plastic between the I/O port and the (oh so useful) expansion port. The total installation time is about 30 minutes.

For all you serious users who are into machine language (I'm not), there is also a built in monitor. The documentation explains how to use the monitor and there is disk software to go with it, but, having no knowledge of assembly (not that I wouldn't want to), I'll stop here. All in all, I would say this is a very useful and practical modification for the 800XL! The XL Boss is available for $79.95 from:
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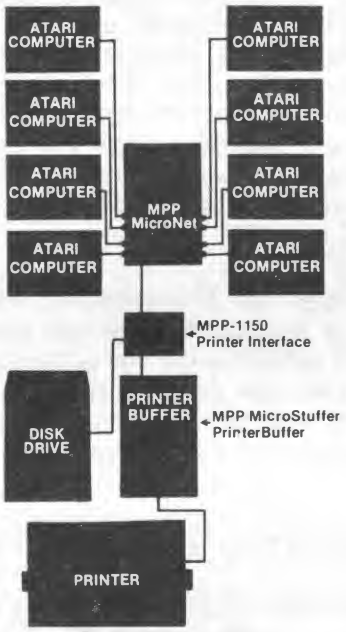

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- Switch selectable to blocks $D5, $D6, and $D7.
- Provides 16 I/O lines and 4 handshake lines that can double as I/O's.
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- Will do interrupts.
- Uses the parallel buss.
- Over 10 sq. in. of drilled area for wire wrap prototypes.

Suggested uses include:

- VCR-Video Disk Controller
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- Music Synthesizer Control

MACE JOURNAL LISTING CONVENTIONS

To reduce our readers' eyestrain, we have adopted a special method for listing programs. Programs will be listed in 38 column format, and certain characters will be replaced by an abbreviated form of their function, printed within curly braces (see below). Any characters to be typed in inverse video will be underlined, and control characters will be represented by their respective letters within curly braces. If a character within braces is also underlined, toggle the inverse video on and then hold down the control key while typing the character.

This method may seem awkward at first, but you should quickly get used to it, and the listings will be much easier to read. The special characters which will be spelled out are as follows:

When you see:	You should type:
{CLEAR}	ESC SHIFT <
{UP}	ESC CTRL -
{DOWN}	ESC CTRL =
{LEFT}	ESC CTRL +
{RIGHT}	ESC CTRL *
{BACK S}	ESC DELETE
{DELETE}	ESC CTRL DELETE
{INSERT}	ESC CTRL INSERT
{DEL LINE}	ESC SHIFT DELETE
{INS LINE}	ESC SHIFT INSERT
{TAB}	ESC TAB
{CLR TAB}	ESC CTRL TAB
{SET TAB}	ESC SHIFT TAB
{BELL}	ESC CTRL 2
{ESC}	ESC ESC
{COMMA}	CTRL , (comma)
{PERIOD}	CTRL . (period)
{SEMI-COLON}	CTRL ; (semi-colon)
{SHIFT =}	SHIFT =

If you see:	Type:
{A}	CTRL A
A	INV. VIDEO A
{A}	INV. VIDEO CTRL A

WHY SELL AIR?

by Dave Heinrich
Manager, Family Computer Center

We in the retail world live and die by the new products. Every time a new product is announced, it takes from four weeks to NEVER to get to the store's shelf. Every time you see a review for the newest piece of software in a magazine, it has been reviewed two to four months earlier. The editors are given a projected release date, rarely accurate. PRINT SHOP is a good example. It has been out for other machines, reviewed for other machines, but not for the Atari. Only as of this writing (3-7-85) has it been released. But that doesn't mean it is on my shelf. It still has to go through my distributor, which adds another two to four weeks.

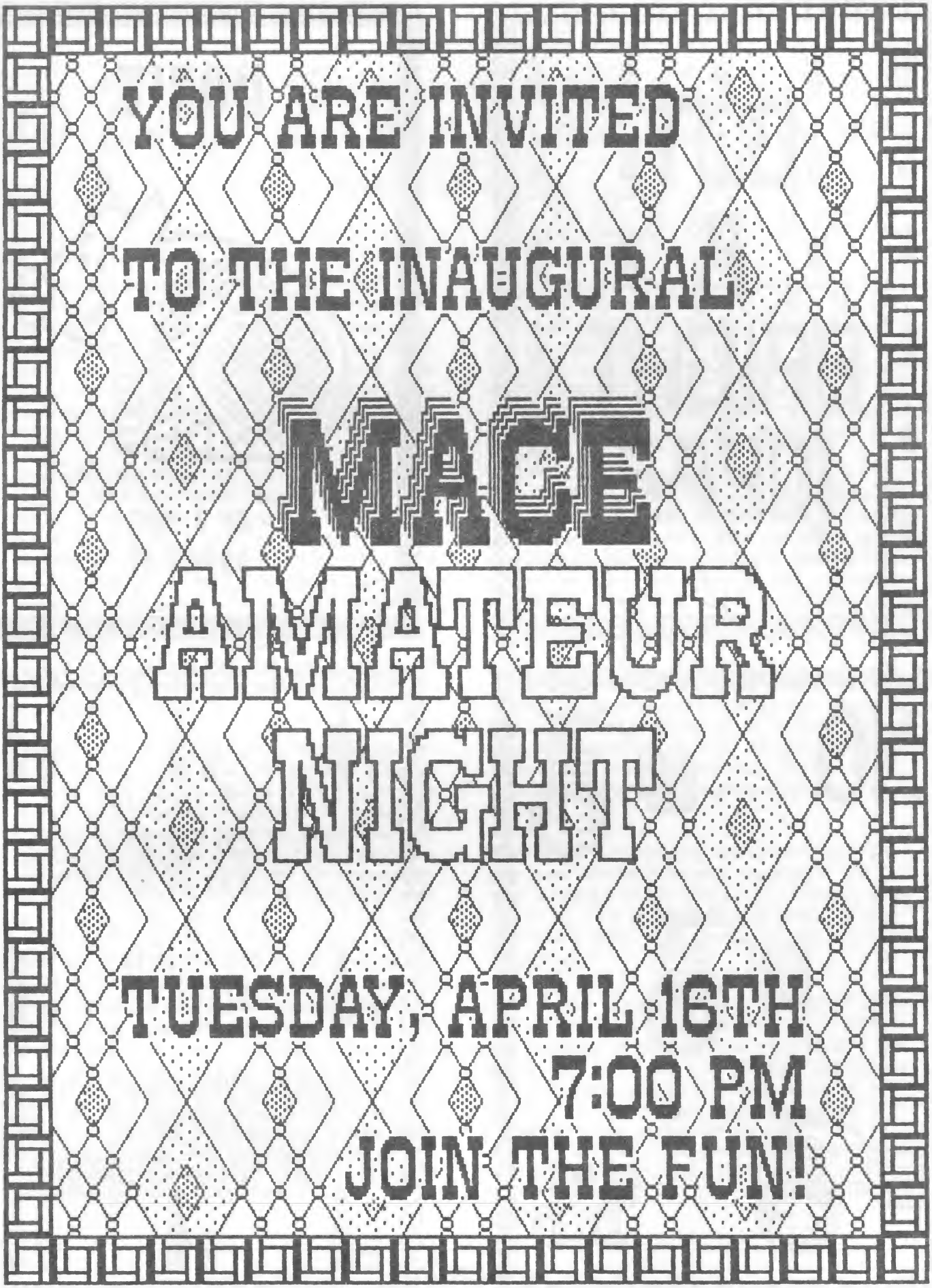
This is also true of the new machines. I have read the reports from CES and the Atari magazines. I admit they look nice and powerful but every hour wasted talking about the new machines is money out of the store's pocket (which is my pocket). Don't take me wrong; I love Atari, but look at their track record. Where is the 1450XLD? And 1400XL? I did not earn anything from the people who told me they would wait for the new machines. And I cannot pay the employees' wages by selling air.

So don't blame the salespeople. We are not any closer to the source than you are. We try to be fair in dealing with the public; be fair to us. When the new product comes in we will talk about it and sell it. But until then I can only sell what is on the shelves, not what is in the air.

APRIL AGENDA

** Amateur Night/Gong Show **
Open to any member. Bring your original programs, any language, disk format only. Limit presentations to 10 minutes, please.

Reviews: Home Energy Analysis
Checkbook Checker
Bridge Pro
Decision Software Demo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AMATEUR
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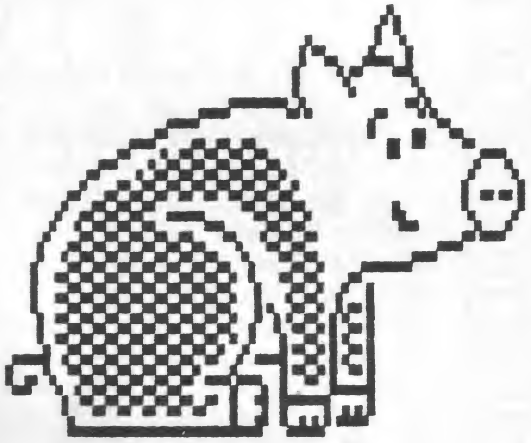
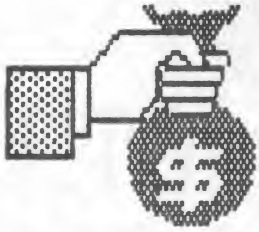
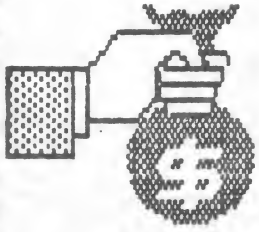
DON'T



BE A HOG ABOUT IT

NO





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GREETINGS FROM YOUR EDITOR...

As you look through this month's Journal, take a minute to note how many of the articles are written by yours truly. No, I don't throw away submissions by other people just to see my name in print; I simply get very few submissions. (And I am EXTREMELY grateful to those people who do care enough to send things in.)

Remember the story of The Little Red Hen? Well, I can't see myself reading all 900-plus copies of the Journal myself just out of spite, but I am getting a tired of having to do the majority of the writing for this Journal. There are hundreds of MACE members who are perfectly capable of writing programs, reviews, and other articles suitable for publication. At each meeting, one or two people come up and tell me about an article which they are going to write, but I seldom see the finished product.

I enjoy writing for and editing the Journal, but I don't have the time to produce several articles each month. If you want to continue to receive a 24 to 28 page quality newsletter, you had better start thinking about what you can do to contribute. So you can't program - you must use your computer for something. Review your favorite piece of software, even if it's old. There are a lot of new users who would appreciate learning about useful software that has been around for a while and probably isn't being advertised any longer. If you program at all, in any language, send in one of your programs and share it with your fellow members.

I can understand that it's hard to come up with ideas for Journal articles. (I face that each and every month.) To take that excuse away from you, I have some suggestions for future articles and programs. Who knows? Fame and glory may be just a 22 cent stamp away!

-- Evaluations of languages other than Atari BASIC. Forth, Pascal, Logo, Action!, Microsoft BASIC, BASIC XL, C - there are a lot of them out there. If you use another language, consider writing a short description of the strengths and weaknesses of the language, with perhaps some examples of equivalent coding in Atari BASIC and your language.

-- A comparison of magazines which cover the Atari. Look over some back issues of Antic and Analog and evaluate their contents. Which one has the best games? The best product reviews? Editorialize about the changes in COMPUTE! over the past couple of years. (Except for trusty Bill Wilkinson, does anyone there even remember Atari?) What about other, lesser known publications?

-- True confessions of a BBS sysop. What's it like being "YELL"ed for at all hours? How do you feel when some jerk breaks into your system and crashes your data disk? Do you have any hints about keeping a clean message base?

-- Useful programming techniques and hints (not necessarily complete programs). Do you have a special crash-proof way to handle user input? A nice trick to format screen output? It doesn't have to be fancy. It just has to be submitted.

I don't like to make threats, and I'm not going to say that if the submissions don't pick up you're going to have to find yourselves a new Editor, but I will say that the size and quality of the Journal will definitely be endangered if more of you don't start helping out. Don't be concerned that you're not an expert; we have room for articles at all levels from beginner to advanced. The important thing is that you care enough about YOUR user group to make a contribution.

THE SHELL GAME
CRACKING ATARI LOGO

by Ann McBain Ezzell

Atari Logo's primitive PX, which puts down the "reversing" pen, can create some interesting graphics effects. This reversing pen will draw if it is over background and erase if it is over a drawn point. Used in a recursive procedure, PX can repeatedly draw and erase a shape:

```
TO FLICKER
PX
REPEAT 4[FD 20 RT 90]
FLICKER
END
```

I was experimenting once with PX, drawing different shapes, when I discovered an interesting result. Type in the following procedures and watch the screen for a while.

```
TO SPI :STEP :ANGLE
FD :STEP
RT :ANGLE
SPI :STEP + 6 :ANGLE
END

TO WEAVE :STEP
WRAP
FS
HT
PX
SPI :STEP 90
END
```

You can choose any value for :STEP in WEAVE, but a small value such as 10 works best. As the procedure runs, the lines will wrap around the screen start overlaying each other. Because the reversing pen is used, some of the original lines will be erased as new ones are drawn, and the dynamic picture resembles a four-way loom driven by a mad weaver. If you watch long enough, you will see the picture erase itself back down to the original point, then start rebuilding.

After watching WEAVE for a while, I decided to add a couple of extra features. WEAVEPAUSE will allow you to halt the display and restart it by pressing any key. COLORWEAVE changes the pen color each time a key is pressed (it cycles through the three colors). You could rewrite the procedures to use pen and background colors to suit your taste.

```
TO PAUSE
IF KEYP [.DEPOSIT 764 255 STOP]
PAUSE
END

TO SPIPAUSE :STEP :ANGLE
IF KEYP [.DEPOSIT 764 255 PAUSE]
FD :STEP
RT :ANGLE
SPIPAUSE :STEP + 6 :ANGLE
END

TO WEAVEPAUSE :STEP
WRAP
FS
HT
PX
SPIPAUSE :STEP 90
END

TO COLR
IF PN = 2 [SETPN 0 STOP]
SETPN PN + 1
END

TO COLORSPI :STEP :ANGLE
IF KEYP [.DEPOSIT 764 255 COLR]
FD :STEP
RT :ANGLE
COLORSPI :STEP + 6 :ANGLE
END

TO COLORWEAVE :STEP
WRAP
FS
HT
PX
COLORSPI :STEP 90
END
```

COLORSPI and SPIPAUSE both check for a keypress and exit to the appropriate routine when one occurs. COLR changes the pen color and then returns to COLORSPI; PAUSE waits for another keypress to resume the drawing procedure. The .DEPOSIT to 764 prevents a character from being printed to the screen.

BRIDGEPRO

Computer Manangement Corporation

Reviewed by Scott Garland

Bridge is a popular card game which involves a lot of strategy. It takes some time to play and four people, and therein lies bridge's drawback: what if you cannot find three other people who have the time and knowledge to play with you? Computer Management Corporation's "BridgePro" solves this problem by allowing one or two people to play, with the computer assuming the other roles. There is even a demonstration mode, so if you don't have time, you can let your computer have some fun.

You have four playing options:

* "SOLO" - one person playing against three computer opponents
* "TWO PLAYER" - two people alternating play, each getting a different hand
* "DUPLICATE" - two people alternating, each getting the same hand
* "DEMONSTRATION" - computer assumes all four players, and displays the game on screen

I expect the solo option is used by most people, although the other two are useful. You are then given the choice of receiving the best hand always, or leaving it up to chance. I like to take my chances, since that is what happens when playing against people. You may also set the speed of the computer's actions on a scale of 1-9. Since the computer will always wait for you to enter your decisions, it is best to set the program for full speed ahead. If you use the demonstration mode, or the "Auto-finish" option, which converts a solo game to demonstration at any time, you might want a slower speed, so you have time to observe the computer's actions and comprehend them.

(One note about the speed: bridge is a strategy game, so computations can take a while if programmed in BASIC. BRIDGEPRO is in machine language, so its fastest speed is FAST!!! Those of you who have bridge programs written in BASIC would do well to purchase BRIDGEPRO.)

The program plays according to the rules, as it should, but it also accepts some "conventions". When bidding in bridge, you are making a contract with your partner on how to play against the other team, according to what cards you hold. The problem is that you don't know what is in your partner's hand, and vice versa, and you cannot tell him, lest the other team find out what you are up to. Therefore the "conventions" were invented: they are clues as to what you have, and whether you agree to what your partner is saying. These conventions are standard in bridge, and BRIDGEPRO recognizes quite a few: no-trump responses; opening bid: pre-empt, two in a suit, two no-trump; overcall; take-out double; and Blackwood. All in all, the program plays the way a good bridge player would.

While BRIDGEPRO is not a tutorial on how to play bridge, there are a few features which help novices. The manual, if a bit short, does give a good account of what bridge is about, what the conventions are, and how to play. As the closing remarks say, however, it is not intended to teach you everything, so you might want to purchase a book on strategy to help you more. Since bidding is a confusing process, you can ask for help at any time. Also, while playing solo, you may begin the hand again, or let the computer finish it. After completing a hand, you can have the computer play it again, and see how your score rates with that of the "perfect player". You can recieve the best hand, as I mentioned above, making it a bit easier to play. All these make for a well-designed program which is good for both novices and the more advanced. (In fact, I pretty much learned how to play from the program, and although I'm no expert, I can play a decent game.)

BRIDGEPRO is not without its faults, though there are few. Most user prompts are accompanied by the ringing of the console bell, which can become mildly annoying. When asking for help in the bidding, you must accept it, so you have no chance to experiment. When playing solo, you cannot ask for help for just one card-play: it will automatically finish the hand for you (I suspect that "Auto-finish" was included to finish only when the card choices are obvious, and a waste of time to play). All the hands are not displayed when the round is

over, which is a nice feature found in other programs. Overall, though, BRIDGEPRO is a good, fast, and helpful way to play bridge whenever the urge strikes you, and I recommend it strongly for the experts, and those who would like to become experts.

Those wishing to purchase BRIDGEPRO should call me at (313) 851-9453, so I can arrange for some good prices. Otherwise, write to:

Computer Management Corp.
2424 Exbourne Court
Walnut Creek, CA 94596

SUMMER GAMES

Epyx Software

Reviewed by Scott Menig

Summer Games is a sports game based on the Olympics. It requires 48K of memory, a disk drive and a joystick. Summer Games sells for $27.99 at most discount stores, and from $28 to $32 at computer stores. In this program you compete in 8 key events: two swimming events, two track events, gymnastics, skeet shooting, pole vaulting and diving. Up to 8 people can play, picking from 18 countries to represent. Summer Games even has an opening ceremony, where the lighting of the torch takes place.

After the opening ceremonies, you have 5 options to choose from. You can compete in all events, compete in one event, practice one event, see world records, or repeat opening ceremonies.

The first event, the pole vault, requires coordination and superb timing if you are to do well. This is one of the harder events, because you must be able to do a series of maneuvers which require perfect timing, or you will not clear the bar. After a few games you begin to see a pattern which helps with the timing.

The next event, diving, requires a quick hand. You compete by performing 4 dives (forward, backward, reverse and inward). After each dive the judges' scores appear in boxes across the center of the screen. A perfect dive will receive scores of 10, but your diver must enter the water vertically and fully extended. Your total score is computed by multiplying the judges' scores by the difficulty of the dive.

The 4 x 400 relay is the next event. This is probably the easiest event in Summer Games, but you must know how to pace your runners or it won't be so easy for you.

The next event is the worst one: the 100 meter dash. It requires you to jiggle the joystick right and left or up and down like a madman. This events gets very tiring and you just can't wait until it ends.

Gymnastics is the next event and the hardest of all. You compete in the vault, which is very difficult. You must do a series of moves by pressing the fire button and moving the joystick. Your score depends on the number of moves performed in mid-air. The final score is the total from two vaults.

The freestyle swimming relay is the next event in the Summer Games. To move your swimmer you must press the fire button every time his arm enters the water. When he reaches the far end of the pool he must make a flip turn. When your swimmer completes his return lap, the next swimmer starts. This goes on until all 4 swimmers have completed their laps. The following event, the 100 meter freestyle, is basically the same as the freestyle relay, with only one swimmer.

Skeet shooting is the next and final event, but it is not really difficult. Once you learn the patterns of the targets it's easy to hit them.

After each event there is an awards ceremony, which tells you the final standings and the medal winners. If you participate in all of the events there is a special ceremony to choose an all-around champion.

I think Summer Games is a great program. The graphics are great and it's very realistic. The only thing they could do to make it better is to add more events. I think every sports fan would enjoy this game.

M. A. C. E.

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